

# The use of smart technologies to facilitate patient engagement in healthcare services: the *Medicinae* case study

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**Purpose:** In the service literature, the patient engagement is defined as a three dimensional construct, composed by behavioral, affective, and cognitive dimensions (Osei-Frimpong *et al.* 2016). Although many studies have focused on the analysis of engagement processes in the healthcare context (Oldenburg *et al.* 2013; Milani *et al.*, 2017), we still need to clarify how recent technological advances impact the three-dimensional construct of patient engagement (Lee, 2018). The purpose of this research is to understand how smart technologies foster patient engagement, by investigating the effects of their use on the cognitive, behavioral and affective dimension of patients' engagement in smart healthcare services.

## **Methodology/Approach:**

This research adopts a qualitative approach to explicate complex issues and advance extant knowledge (Dubois and Gadde, 2002; Gummesson, 2005, 2017). The study focuses on smart technologies implemented by *Medicinae*, with an application of information retrieval, automated reasoning, and knowledge representation. *Medicinae* is a state-of-the-art surgical clinic that makes use of intelligent technologies for the management of the patient workflow. The research process followed two phases. The first phase concerned the investigation of how smart technologies function. Semi-structured interviews with technology developers offered preliminary insights (on the features of A.I) that impact patient engagement. The second phase was based on an in-depth analysis of technologies implemented in *Medicinae*. Semi-structured interviews with patients and *Medicinae* staff were conducted to elicit the investigated phenomena' patterns, concepts, and categories (Gummesson, 2005).

## **Findings**

The results offer the opportunity to see how smart technologies are becoming an integral part of the new path of the health service. Smart Technologies are providing a new approach for patients to receive the right healthcare at the right time, for example by enabling on-demand access to content, care and resources for the condition without imposing time and place to request information, enabling a speeding up interaction (Behavioral engagement). The results will also show that the introduction of smart technologies will be able to allow patients to continue their care independently, keeping their vital parameters under constant control and having the opportunity to interact with the doctor in case of need enabling a healthcare personalized experience (cognitive engagement). This represents a first step towards the emotional involvement of the patient in a reactive and conversational way (affective engagement).

## **Originality/Value**

This study contributes to research on patient engagement in the healthcare contexts where AI plays an increasingly important role. The research offers a deeper understanding of the new dynamics and actors that improve “smart” patient engagement. Finally, this opens up new possibilities for researchers and managers who design patient engagement involving tech.

**Keywords:** *smart technologies, patient engagement, smart patient engagement*